ADV4-H61 **PATENT APPLICATION**

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	Examiner: Fred H. Munn
NETWORKFAB CORPORATION	Group Art Unit: 3662
Serial No.: 10/785,353	
Filed: 2/24/2004	December 26, 2006
For: REAL-TIME EMITTER LOCATING SYSTEM AND METHOD	San Diego, California 92108

CUSTOMER NUMBER: 22848

AMENDMENT

Honorable Commissioner of
Patents and Trademarks
Washington, D.C. 20231

Dear Sir:

In response to the Office Action mailed 10/25/2006, please amend the subject application as follows:

IN THE SPECIFICATION:

Please amend the Abstract as follows:

"A Real-time Emitter Locating (EL) System and Method is disclosed. The system provides a technique for taking in data sets (lines of bearing) from DF receivers and characterizing those signals with their respective probabilities of error. Then using a unique method, the preferred system applies a recursive processing technique to this

continuous stream of data, displaying transmitter positions with significantly less uncertainty. Furthermore, the preferred system is able to perform these functions in real-time. The system is further capable of being fully automated to reduce the processing time and reduce the necessity of human intervention. Still further, in an alternative embodiment of the present invention the system can be remotely controlled over a communications network whereby collected locating data from a single DF set, or alternatively from more than one~~several~~ DF sets can be combined to arrive at estimated positions for a transmitter. In this way, a far more efficient EL System can be achieved in which the emitter's position can be determined more quickly from a centralized command facility. This combination of data filtering and data collection techniques significantly reduces measurement uncertainties and enhances the accuracy of EL systems."

Please amend the specification at page 6, line 14 as follows:

"Figures 6A and 6B depicts the graphical approach employed by the present invention to determine a transmitter's position point; and"

Please amend the specification at page 8, line 13 as follows:

"What is needed therefore in order to fully optimize these EL systems is (1) The enhanced ability to evaluate the measurement data 20 and reduce the overall uncertainties; and (2) An enhanced technique to collect the LOB data. These two things are described in this description."

Please amend the specification at page 11, line 16 through page 12, line 10 as follows:

"Figure 5 is a flow chart depicting the prior art DF method for locating a transmitter. As shown, the EL system receives a stream of Line of Bearing and Quality information from at least three DF sets 42A, 42B and 42C; three DF sets is generally the minimum necessary in order to achieve triangulation. Next, the EL system calculates the average Line of Bearing from a particular segment of each DF set 44A, 44B and 44C. These averaged Lines of Bearing from each DF set to the transmitter are then plotted 46 to result in a conclusion by the EL system as to the transmitter's location 48. As discussed above, the target problems to be resolved by the present invention is the delay in arriving at the average Line of Bearing for each DF set, the lack of control and understanding of the inherent error in each of the LOB averages, and also the need for three or more active and high-quality DF set LOB signals in order to arrive at any sort of reliable transmitter position. Figure 6A shows the fundamentals of how the present approach operates.

Figure 6A depicts the DF set at two subsequent locations. For the purpose of clarifying the geometry of the locating solution method, however, the DF set is shown as stationary (relative to the transmitter location graphical solution). As a result, Figure 6A can be considered to be a DF Set-centric view, wherein the DF set appears to be stationary and any lines of bearing or transmitter locations are in relation (or relative to) the moving DF set. In fact, the transmitter might actually be stationary in the depicted Figure 6, with all relative movement being provided by the transmitter. First, PP(0) (the cross-over point) is determined as discussed in the Specification previously. As the DF Set is then moved, the line of bearing to the cross-over point will continue to "point" towards PP(0). When a new DF Set location is reached and a new line of bearing is "drawn" to the newly-detected

transmission. The connecting vector, in this example, is then drawn perpendicular to the latest line of bearing, through the last line of bearing or estimate position (in this case it is PP(0)).

Figure 6B graphically depicts the method of the present invention (as specifically described below in connection with the description associated with Figure 7), from an "Earth-centric" or reference frame fixed in relation to the earth."